March 16, 2012

Direct Phone Number: 512.867.8477 Direct Fax Number: 512.867.8691 jeff.civins@haynesboone.com

Mr. Jonathan Bull, (6 RC) Ms. Roxanne King, (6 EN) United States Environmental Protection Agency Region 6 1445 Ross Avenue, Suite 1200 Dallas, TX 75202-2733

Re:

Clean Harbors in El Dorado EPA ID No. ARD069748192

#### Dear Jonathan and Roxanne:

Thank you for participating in a conference call with Phil, Scott, and me on February 29, 2012 to discuss issues raised in the Region's January 30, 2012 RCRA Compliance Inspection Report relating to the Clean Harbors in El Dorado (CHEL) incinerator gas saturator and associated brine manufacturing and emission control equipment, which collectively comprise the Brine Unit. As requested, below is our follow-up, which includes: our understanding of the Region's concerns; the pertinent facts; and the reasons why we believe the Brine Unit itself, as well as the saturator solution it processes and the brine it manufactures, are not regulated under the Resource Conservation and Recovery Act (RCRA).

#### The Region's Concerns

In the Executive Summary to the Inspection Report, the Region identifies two major concerns. It also identifies an auxiliary concern, which it suggests CHEL might have addressed by pursuing delisting.

<sup>1</sup> For clarification, we use the term "saturator" to refer to the unit through which the combustion exhaust gases initially pass -- to remove HC1 -- and the term "scrubber" to refer to the high energy scrubber that scrubs the gas from the saturator after it passes through condenser columns and before it passes through the fabric filters in the baghouse and exits out the stack.

Mr. Jonathan Bull, EPA, Region 6 Ms. Roxanne King, EPA, Region 6 March 16, 2012 Page 2

The Region's first major concern is the operation of the Brine Unit under a recycling exemption. The Region maintains that the unit does not qualify for a recycling exemption because the saturator solution is a sludge, and therefore a solid waste, and because the commercial use of the liquid is "use constituting disposal." The Region maintains too that the processing of the saturator solution constitutes reclamation.

The Region's second major concern is the sale of reclaimed sludge liquids as brine to the oil and gas (O&G) industry for use in exploration activities. The Region maintains that the liquid component produced from saturator activities is defined as hazardous waste sludge, in addition to classification based on the "contained in policy" and "derived from rules." The Region states that "[u]se or reuse as a commercial substitute applies in situations without reclamation activities and the brine . . . is not a chemical listed in 261.33." As a result, the Region, citing 261.2(c)(1)(ii), concludes the "ordinary manner of use," placement on land, does not apply.

The Region's auxiliary concern is the sale of the brine specifically for use in O&G exploration. The Region notes while the Brine Unit could be upgraded to a RCRA unit, that upgrading does not address the final disposition of the liquid waste. The expressed concern is that wastes not "be placed in or on the land or used to produce products placed in or on the land as part of any disposal, recycling or re-use activity." The Region concludes the role of the brine for exploration activities is clearly "use constituting disposal." The Region suggests CHEL has had the option to pursue delisting of this "waste," noting that CHEL has stipulated that the processed saturator water does not contain hazardous constituents not found in commercially purchased brine.

As explained below, we believe that our manufacture and sale of commercial brine is consistent with RCRA's objectives and national policy and with EPA's implementing regulations. We believe too that it should be encouraged, rather than discouraged by the placement of regulatory obstacles in its way. Set forth below is our summary of the pertinent facts, including a description of the saturator and of the Brine Manufacturing Unit, followed by our analysis of applicable law, which explains why we conclude the Region's legal concerns are unjustified.

#### **Pertinent Facts**

#### The Saturator

At CHEL, RCRA wastes containing chlorinated organic compounds are fed to two rotary kilns and to the secondary combustion chamber (SCC), as well as to a resource recovery boiler, depending on the specific characteristics of the waste. The kilns are used for treatment of solids, sludges, liquids, and gases; the SCC and resource recovery boiler, for liquids and gases. The inert ash passes through the kilns into a quench bath and then is removed for disposal. The kiln's

Mr. Jonathan Bull, EPA, Region 6 Ms. Roxanne King, EPA, Region 6 March 16, 2012 Page 3

exhaust gases pass through individual vertical cyclones, where additional ash is removed. The kiln exit gases then pass into the SCC, into which liquid and gaseous wastes also are fed. The exhaust gases from the SCC and from the resource recovery boiler, which contain HCl, CO<sub>2</sub>, and water vapor, are passed to the saturator, where they are cooled and combined with a lime (Ca(OH)<sub>2</sub>) slurry. The HCl in the exhaust gases chemically combines with the Ca(OH)<sub>2</sub> to form calcium chloride (CaCl<sub>2</sub>) brine solution.

The exhaust gases from the saturator pass through two condenser towers in parallel, to condition particulates for removal downstream. Those gases then pass through a high-energy scrubber and fabric filter, and are emitted through the 195-foot tall stack.

After several quench cycles, the saturator solution can no longer neutralize HCl and is pumped, for further processing, to the Calcium Chloride Recovery Unit, more accurately described as the Brine Manufacturing Unit, the term used in this letter.

#### The Brine Manufacturing Unit

The Brine Manufacturing Unit is in an area of its own, a portion of which is under a roof, and comprises a sophisticated series of processing equipment, including a heat exchanger and various tanks, pumps, and filter presses that perform a multitude of functions. The brine manufacturing process consists of five basic steps: (1) neutralization; (2) gross filtration; (3) evaporation; (4) metals reductions; and (5) polish filtration, and is described below.

From the saturator, the brine is pumped to the neutralization tank. In the neutralization tank, a motor driven mixer blade is used to keep the solids suspended and the fluid mixed. A pH meter measuring the pH of the tank contents determines the amount of lime slurry required for neutralization. The pH is controlled in the 6.5 to 8.0 range.

From the neutralization tank, the brine is pumped to one of two filter presses that constitute the gross filtering step, which removes the majority of the solids in the brine. Brine is removed from the neutralizing tank by two air operated diaphragm pumps -- one dedicated to each filter press. The pumps are located on the brine building second floor near the presses.

The filter presses are operated on a batch basis. Brine is routed to a clean press and flow continues until the desired pressure is achieved. At that pressure, the operator initiates a press cleaning cycle. The feed pump is shut down and the feed line blown empty with air. This air also clears most of the brine out of the press. The empty press is opened and the plates shifted to allow the accumulated filter cake to discharge. The filter cloth media are washed as required. The press is closed and, when needed, is put back on line and the feed pump started. The cake

Mr. Jonathan Bull, EPA, Region 6 Ms. Roxanne King, EPA, Region 6 March 16, 2012 Page 4

exiting the press drops into a dumpster at ground level via a steel chute that has a rubber sock attached to its bottom. The sock allows the dumpster to be moved from under the chute.

The filtered brine exiting the press is pumped to the solids free brine tank. This liquid is relatively solids free, but is still dilute (low specific gravity). To concentrate the brine to the 1.4 specific gravity required by customers, a skid mounted evaporation unit is utilized. This unit employs steam from the resource recovery or packaged boiler at 125 psig to evaporate water from the brine and increase its dissolved solids concentration. The steam is tempered by the addition of condensate upstream of the heat exchanger.

The brine is then pumped to the evaporator using an air diaphragm pump. The evaporating step involves a pump-through heat exchanger under pressure and a flash valve and tank. A recirculation pump removes brine from the flash tank and increases its pressure. The high-pressure brine passes through a vertical shell and tube-type heat exchanger where steam on the shell side of the exchanger passes heat through titanium tubes into the fast moving brine. The brine temperature is elevated slightly and its pressure is reduced as it flows upward. The two-phase stream passes immediately into the flash tank. The liquid flashes, removing water from the brine solution in the form of vapor. The brine liquid accumulates in the tank base and the vapor rises to the top of the vessel and is withdrawn.

The flash tank level controls the feed to the evaporating step. Depending on the ambient temperature and the residence time of the brine in the clarifier, its temperature may be lower than the 170°F at the saturator rundown tank. The capacity of the evaporation unit, while producing a 1.4 specific gravity product, varies with the feed temperature. For brine feed at 170°F, the capacity is 24.9 gpm. If the feed is at 60° F, the capacity is reduced about 20% to 19.9 gpm. The required feed rate will depend on the chlorine feed rate to the incineration system. Condensate formed in the steam heater is removed from the heater by a condensate pump on level control. The condensate is piped from the pump to the plant condensate return system.

The whole circulating system operates at negative pressure to keep the boiling point of the concentrated brine between 180 to 190°F. Steam is added to the heat exchanger on flow control. Brine is removed from the system at the recirculation pump discharge based on density control of the circulating fluid. The flash cooler tank exit brine is pumped to a concentrated brine tank. The cooler is level controlled by adjusting the speed of the brine transfer pump.

Vapors from the brine flash tank are drawn into barometric condenser flash tank. Cooling water is introduced at the top to condense the vapors. The condensed liquid exits the bottom and is gravity fed into the seal tank. Any remaining vapors from the condenser flash tank are drawn out

Mr. Jonathan Bull, EPA, Region 6 Ms. Roxanne King, EPA, Region 6 March 16, 2012 Page 5

through the steam ejector, and both the vapors and steam are discharged directly into the seal tank.

All lines entering the seal tank are designed to discharge under the tank's water level to provide a water seal so air can not be sucked into vacuum system, providing a final condensing of any vapors or steam that did not fully condense. The seal tank is pumped to the cooling tower and is level controlled. The seal tank is vented to the atmosphere.

The brine then is pumped to a tank and is processed in the metals precipitation and filtration step to obtain a sales grade CaCl<sub>2</sub> brine stream. Concentrated brine material is transferred from that tank to the brine batch reactor. Sodium hydrosulfide (NaSH) is added to the batch tank with the concentrated brine to remove the heavy metals content (lead, iron, etc.) of the brine. After adequate mixing, the treated brine is filtered through the polishing press to remove the metal sulfide compounds and remaining solids.

Capital costs for the Brine Manufacturing Unit totaled almost \$3.7M, based on 2001 dollars. Its operating costs for 2011 totaled almost \$1.6M. CHEL made these capital investments and incurs these operating costs not to treat the incinerator combustion gases, but rather to manufacture a commercial chemical product -- CaCl<sub>2</sub> brine.

CHEL's brine meets all specifications for use as an oil and gas well drilling fluid and replaces other commercially manufactured CaCl<sub>2</sub> brine. It is used to control wellbore pressure, to remove drilling cuttings, and to increase fracturing. CHEL assures the quality of each batch utilizing its onsite laboratory facilities. There is an active market for CHEL's CaCl<sub>2</sub> brine. CHEL has two customers that purchase all its production. CHEL has been selling 100% of its calcium chloride brine solution for over 15 years, manufacturing and selling approximately 9,000,000 pounds of it per year.

#### Applicable Law

CHEL's manufacture and sale of calcium chloride brine over the past 15 years is consistent with RCRA's objectives and national policy. It also has been expressly approved by Randall Mathis, the Director of the Arkansas Department of Pollution Control and Ecology, in a January 31, 1997 letter to the company, in which he recognized "the significant impact made by ENSCO's innovative programs to recover usable materials from hazardous wastes" and in which he

Mr. Jonathan Bull, EPA, Region 6 Ms. Roxanne King, EPA, Region 6 March 16, 2012 Page 6

encouraged the company to continue those efforts.<sup>2</sup> In the absence of compelling regulatory roadblocks, CHEL's manufacture and sale of calcium chloride brine should be encouraged. CHEL's calcium chloride brine falls squarely with the definition of commercial product and is not a solid waste under EPA's implementing regulations.

## CHEL's Manufacture and Sale of Brine is Consistent With RCRA's Objectives and National Policy

One of Congress's objectives under RCRA is "minimizing the generation of hazardous waste and the land disposal of hazardous waste by encouraging process substitution, materials recovery, properly conducted recycling and reuse, and treatment . . ." 42 U.S.C. §6902(a)(6). Congress declared it to be national policy that "wherever feasible, the generation of hazardous waste . . . be reduced or eliminated as expeditiously as possible." 42 U.S.C. §6903(b). CHEL's manufacture and sale of brine, which results in a reduction of hazardous wastes requiring disposal and in the generation of a commercial product, is consistent with this objective and national policy, as well as with EPA's implementing regulations.

# CHEL's Saturator Solution and Brine are not solid wastes, and the Brine Unit is not subject to RCRA regulation.

CHEL's Saturator Solution is an ingredient in the Brine, which is a commercial product, and neither the Saturator Solution nor the Brine Product are solid wastes.

RCRA authorizes EPA to regulate solid wastes, not commercial products. Under EPA's regulations in chapter 261 of title 40, CHEL's brine -- and the saturator solution used to produce it -- are not discarded and are not solid wastes. It follows, therefore, that CHEL's brine production process is not subject to RCRA either.

An analysis of the regulatory status of the saturator solution and brine product must begin with 40 CFR §261.2(a) through (d), which define what a solid waste is. Under section 261.2(a), the term "solid waste" is generally defined as any discarded material that is not excluded under other provisions. Under subsection 261.2(a)(i), a material, to be "discarded," must be either (A) abandoned, (B) recycled, (C) considered inherently waste-like, or (D) a military munition. The

<sup>&</sup>lt;sup>2</sup> Although CHEL's legal analysis differs somewhat from those upon which ENSCO relied, we reach the same conclusion, that is, that the saturator solution and brine are not solid wastes and that the process is consistent with the policy and objectives of RCRA.

Mr. Jonathan Bull, EPA, Region 6 Ms. Roxanne King, EPA, Region 6 March 16, 2012 Page 7

Region's legal analysis focuses on the recycling criterion. The other subsections are inapplicable.

Under section 261.2(c), materials are solid wastes if they are recycled as specified in subsection (1) through (4). Under the Region's argument, the relevant subsections appear to be subsection (1), entitled "Used in a manner constituting disposal," and subsection (3), entitled, "Reclaimed."

EPA maintains that the saturator brine solution is a sludge. Subsection (1) of §261.2(c) explains materials in Table 1, which include sludges, that are noted with an asterisk are solid wastes when they are either (A) "[a]pplied to or placed on land in a manner that constitutes disposal" or (B) "[u]sed to produce products that are applied to or placed on the land or are otherwise contained in products that are applied to or placed on the land (in which case the product itself remains a solid waste)." Subsection (1)(ii) qualifies this definition by explaining that "commercial chemical products listed in §261.33 are not solid wastes if they are applied to the land and that is their ordinary manner of use." (Emphasis added).

There is no argument that CHEL's brine would not be a solid waste if it were listed in §261.33; the Region argues instead that "ordinary manner of use," placement on land, does not apply because the brine is not listed in §261.33. In making that argument, the Region ignores pertinent agency guidance to the contrary.

The brine is used to make an oil and gas well drilling fluid that is used to remove drill cuttings, to maintain well bore pressure, and to effect fracturing -- the ordinary and intended use of the drilling fluid. Assuming that that use is synonymous with "applied to or placed on land," the "ordinary use" exemption nonetheless applies <u>regardless</u> of whether the brine is listed in §261.33.

In its technical corrections to the definition of solid waste, 50 Fed. Reg. 14216 (April 11, 1985), the agency offers clarification regarding the Regulatory Status of Non-Listed Commercial Chemical Products. On page 14219, the agency states:

Under the final rules, commercial chemical products and intermediates, off-specification variants, spill residues and container residues listed in 40 CFR 261.33 are not considered solid wastes when recycled except when they are recycled in ways that differ from their normal use—namely, when they are burned for energy recovery or used to produce a fuel. A number of questions have been

<sup>&</sup>lt;sup>3</sup> We do not believe it is.

Mr. Jonathan Bull, EPA, Region 6 Ms. Roxanne King, EPA, Region 6 March 16, 2012 Page 8

raised as to the regulatory status of commercial chemical products that are not listed in §261.33 but exhibit one or more of the hazardous waste characteristics (*i.e.*, ignitability, corrosivity, reactivity, and extraction procedure (EP) toxicity).

Although we do not directly address non-listed commercial chemical products in the rules, their status would be the same as those that are listed in §261.33—That is, they are not considered solid wastes when recycled except when they are recycled in ways that differ from their normal manner of use. This is the same relationship that exists between discarded commercial chemical products that are listed in §261.33, and those that exhibit a characteristic of hazardous waste. We believe this point is implicit in the rules, as it is implicit in existing §§261.3 and 261.33. (Emphasis added).

In sum, the agency clarifies that the status of non-listed chemical products, though not expressly stated in the rules, is the same as that of chemical products that are listed: they are not considered solid wastes except when they are recycled in ways that differ from their normal manner of use. This point is reaffirmed in other agency guidance.

In a December 27, 2000 Memorandum to senior staffers, for example, Elizabeth Cotsworth, EPA's Director of Office of Solid Waste, further explains:

Under RCRA, a material regulated under subtitle C only if it is a "hazardous waste" as defined in 40 CFR. Section 261.3, and a material is only "hazardous waste" if it meets the definition of "solid waste" in 40 CFR. Section 261.2. A "solid waste" is defined in section 261.2 as a "discarded material." Commercial chemicals or chemical products generally are not "discarded," even when their use results in deposit on the land, if they are being used for their ordinary or original intended purpose. See section 261.(c) (ii) (commercial chemical products are not solid wastes when applied to the land and that is "their ordinary manner of use") and section 261.33 introduction (enumerated commercial chemical products are solid wastes when "applied to the land in lieu of their original intended use"). For example, a pesticide applied on the land for the purpose of killing pests is not considered "discarded," and thus is not solid or hazardous waste subject to RCRA regulatory requirements. Similarly a commercial chemical or chemical product that is specially formulated to treat contamination and then is injected into ground water to treat that type of contamination is not considered discarded and is not subject to RCRA regulatory requirements. (Emphasis added).

Mr. Jonathan Bull, EPA, Region 6 Ms. Roxanne King, EPA, Region 6 March 16, 2012 Page 9

Under Section 261.2(f), relating to documentation of claims that materials are not solid wastes, CHEL's brine demonstrably is not a solid waste. As noted above, there is an established market for the brine. CHEL annually sells 9,000,000 pounds of it. The only reason this enterprise has been halted, to the detriment of both CHEL and its customers, is because of the position the Region has taken in the inspection report.

CHEL satisfies the requirement of §261.2(c)(1)(ii), regarding ordinary use, but even were we incorrect regarding the applicability of that subsection, CHEL's brine nonetheless would be excluded from the definition of solid waste because it is not being applied to or placed on the land in a manner that constitutes disposal. As explained above, the brine's ordinary use is not for a product that is applied to the land, but rather is for a product -- a drilling fluid that is used in a borehole, to remove cuttings, maintain well bore pressure, and effect fracturing. Those drilling fluids are recovered, but whether and to what extent they are recovered does not affect the conclusion that use in a borehole for the drilling of an oil and gas well is not placement on or application to land. Section 261.33 is instructive here.

Section 261.33 applies to commercial chemical products when they are discarded or intended to be discarded as described in §261.2(a)(2)(i), "when they are mixed with waste oil or used oil or other material and applied to the land for dust suppression or road treatment, when they are otherwise applied to the land in lieu of their original intended use or when they are contained in products that are applied to the land in lieu of their original use, or when in lieu of their original intended use, they produced for use as (or as a component of) a fuel . . ." (Emphases added). The drilling fluids of which CHEL's brine is a component are intended to be injected into the borehole, which is their ordinary use; they are not intended to be applied to or placed on the land.

This conclusion, regarding ordinary use, is bolstered by the expressed exemption from the definition of hazardous waste for "drilling fluids, produced waters and other wastes associated with the exploration, development, or production of crude oil, natural as or geothermal energy." See 40 CFR § 261.4(b)(5) and 42 USC § 6921(b)(2)(A).<sup>4</sup> In a 1987 report to Congress regarding the scope of the exemption, EPA stated:

Drilling fluids, produced waters, and other wastes intrinsically derived from primary field operations associated with the exploration, development, or

<sup>&</sup>lt;sup>4</sup> We are not asserting that the oil and gas exemption applies to our calcium chloride brine before it is injected; we are asserting instead that the injection of drilling fluids into the well borehole is not synonymous with land application or placement and further that the injection of drilling fluids is their ordinary use.

Mr. Jonathan Bull, EPA, Region 6 Ms. Roxanne King, EPA, Region 6 March 16, 2012 Page 10

production of crude oil, natural gas or geothermal energy are subject to the exemption...

Those substances that are extracted from the ground or injected into the ground to facilitate the drilling, operation, or maintenance of a well or to enhance the recovery of oil and gas are considered to be uniquely associated with exploration, development, or production activities. Additionally, the injection into the well bore of materials that keep the pipes from freezing or serve as solvents to prevent paraffin accumulation is intrinsically associated with exploration, development, or production activities. (Emphasis added).

The use of brine as a drilling fluid is its ordinary use and does not constitute application to land or disposal.

The Region mistakenly suggests CHEL's manufacturing of brine constitutes reclamation. Section 261.1(c)(4) explains "[a] material is 'reclaimed' if it is processed to recover a usable product, or if it is regenerated." Although chlorine, the atom, is being recovered and recycled, there is no recovery or regeneration in any regulatory sense.

The chlorine atom is not a material. Chlorine atoms do not exist in nature; they bond to other atoms to form molecules. For example, chlorine, Cl<sub>2</sub>, is a diatomic molecule that exists as a gas. Chlorine, the atom, may also bond with other atoms, e.g., in the incinerator feed materials as chlorinated organic compounds, such as ethylene dichloride -- CH<sub>2</sub>Cl<sub>2</sub>, in the incinerator gases as hydrogen chloride -- HCl, and in the saturator as calcium chloride -- CaCl<sub>2</sub>.

CaCl<sub>2</sub> does not exist until the HCl in the incinerator exhaust is combined with the Ca(OH)<sub>2</sub> in the saturator solution. As discussed below, the incinerator exhaust gas, by definition, is not a solid waste. The CaCl<sub>2</sub> brine, regardless of whether it is a solid waste, is a newly created material that is then processed to manufacture a new commercial product. From a regulatory perspective, the brine is neither recovered nor regenerated. Section 261.1(c)(4) gives as an example of reclamation the recovery of lead values from spent batteries and the regeneration of spent solvents. The brine production process is not analogous; the brine is not a preexisting material that is recovered or regenerated; it is initially formed in the saturator.

Because neither the saturator solution nor the brine qualify as solid wastes under sections 261.2(a) through (d), we need not reach sections 261.2(e)(1)(i) and 261.2(e)(1)(ii) and section 261.2(e)(2), but those sections also are consistent with our analysis. Section 261.2(e) states materials are not solid wastes when they can be shown to be recycled by being (i) used or reused

Mr. Jonathan Bull, EPA, Region 6 Ms. Roxanne King, EPA, Region 6 March 16, 2012 Page 11

as ingredients in an industrial process to make a product, provided the materials are not being reclaimed; or (ii) used or reused as effective substitutes for commercial chemical products.

As discussed above, the saturator solution is being used as an ingredient in an industrial process to make a product -- the brine -- and does not involve reclamation. The final calcium chloride brine is used, not merely as a substitute, but rather as a commercial chemical product. And again, the carve out of section 261.2(e)(2)(i), for materials that are used in a manner constituting disposal or used to produce products that are applied to the land, does not apply because the materials are not applied to the land. Even if they were applied to the land, this provision does not apply to materials used in their ordinary manner of use.

CHEL's Saturator Solution and Brine are not solid wastes and therefore not hazardous wastes for another reason: they are not derived from a hazardous waste because the combustion exhaust gases are not a solid waste subject to RCRA regulation.

The definition of solid waste includes solid, semisolid and liquid, as well contained gas. By "contained gas," EPA means a gas that is contained in a cylinder or other non-flow-through containment system. In contrast, an uncontained gas, such as a gas flowing through a pipe, column, or tank, is not a solid waste. See, e.g. In re BP Chemicals America, Inc., RCRA Appeal No. 89-4, 1991 EPA App. LEXIS 27; 3 E.A.D. 667 (EPA Admin., Aug. 20, 1991) and sources cited therein (The Administrator specifically rejected Region V's argument that gaseous emissions were "contained" by the process units they passed through, associated piping or the facility itself, holding that the Agency's definition of the term "contained" has consistently been confined "in the narrower sense of being in an individual container such that the gas is amenable to shipment"). As a result, CHEL's combustion exhaust gas is not a solid waste.

In its publication, "Hazardous Waste TSDF – Technical Guidance RCRA Air Emission Standards for Process Vents and Equipment Leaks," EPA-450/3-89-021 (July 1990), EPA reiterates this point. On page 2-3, EPA expressly addresses the regulatory status of process vent or exhaust gases from hazardous waste incinerators, explaining:

Air standards also have been promulgated for the control of air emissions from permitted hazardous waste incinerators (40 CFR 264, Subpart 0). These standards require that incinerators burning hazardous waste be operated to achieve a destruction and removal efficiency (DRE) of at least 99.99 percent for those primary organic hazardous constituents listed in the facility permit. However, the process vent stream (i.e., gases and vapors) from a hazardous waste management unit would not be classified as a hazardous waste. Noncontainerized gases emitted from hazardous wastes are not themselves hazardous wastes because the

Mr. Jonathan Bull, EPA, Region 6 Ms. Roxanne King, EPA, Region 6 March 16, 2012 Page 12

RCRA statute implicitly excludes them. Therefore, combustion of process vent streams in an incinerator is not subject to the 99.99 DRE requirement. (Emphasis added).

In a July 15, 1986 letter from Matthew Strauss, Chief, Waste Characterization Branch EPA, to Gregory Harvey, the agency reached a consistent conclusion, finding that the vapors of spent solvents, which were captured by carbon canisters, "are not defined as a solid or hazardous waste" ... "[s]ince these solvents are not contained." The agency further concluded that "the solvent vapor would not be covered by the listing or by the mixture rule." Similarly, it should not be covered by the derived from rule either.

In the Strauss letter, EPA goes on to explain that those wastes would only be hazardous if they exhibited any of the hazardous wastes characteristics. But applying that reasoning to our situation, even were the saturator solution to otherwise be a solid waste and hazardous by characteristic, it would nonetheless not be a solid waste.

Table 1 in section 261.2, section 261.2(c)(3) indicates sludges with an asterisk are solid wastes, but those without are not. Even assuming the saturator solution, therefore, were a reclaimed sludge, it would not be solid waste because characteristically hazardous sludges do not have an asterisk.

In sum, Clean Harbors' brine manufacturing process is consistent with RCRA's objectives and national policy. EPA's implementing regulations should be interpreted, therefore, with an eye to encouraging rather than discouraging it. In any event, under the pertinent regulations, Clean Harbors' saturator solution and the brine manufactured from it are not solid wastes, nor are they hazardous wastes, and the process of manufacturing the brine is not subject to RCRA.

We look forward to an expeditious resolution of this matter and being able to once again use our Brine Manufacturing Unit to process the saturator solution and sell brine for commercial use to our customers. If you have any questions or further concerns, we would be happy to address them in a meeting or in writing.

Mr. Jonathan Bull, EPA, Region 6 Ms. Roxanne King, EPA, Region 6 March 16, 2012 Page 13

Thanks for your consideration.

Jeff Cevins

Sincerely,

Jeff Civins

c: Phil Retallick Scott Kuhn